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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/743,096	04/17/2001	Per Stobbe	0459-0539P	4938

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EXAMINER	
TRAN, HIEN THI	
ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/743,096	STOBBE ET AL.	
	Examiner	Art Unit	
	Hien Tran	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,11,12 and 14-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,11,12 and 14-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12/27/05* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-5, 7, 11-12, 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Kondo et al (EP 736,503) in view of Kitagawa et al (4,857,089).

With respect to claims 1-3, 7, Kondo et al disclose a porous filter body for filtering soot particles from diesel engine exhaust gasses, the filter body being a honeycomb wall flow filter body in which interconnected porous filter walls, each of which has a gas inlet surface and a gas outlet surface, define a multiplicity of channels 551, 552, each channel being closed at one end and neighboring channels being closed at alternate ends, the filter walls 5 being made of a material based on metallic and/or ceramic particles being bonded together, such as SiC, the porosity of the filter wall being constituted by interconnected voids defined between the metallic and/or ceramic particles, a catalytically active material

2, such as Pt, Rh, etc. for catalyzing oxidation of soot, being deposited on at least part of those surface parts of the metallic and/or ceramic particles which are exposed to the voids, and a porous membrane 1 having a smaller pore size than the porous filter wall being applied to the gas outlet side or the filter walls (col. 3, line 13 to col. 4, line 58; Fig. 19). Kondo et al further discloses that the pores of the filter walls are about 20-40 μm, and the porosity of the filter walls is within the range of 30-80% (col. 3, line 13 to col. 4, line 58; col. 10, lines 49-50; col. 8, lines 20-21) and the porous membrane has a means pore size in the range of 10-60 μm (col. 3, lines 37-39) and a thickness of 0.05 mm (col. 10, lines 42-43).

The apparatus of Kondo et al is substantially the same as that of the instant claim, but fails to disclose whether the coating 1 may be applied to the outlet side only.

However, since the claim is treated as open language, it does not exclude the additional membrane at the inlet side, and therefore meet the instant claims.

In any event, Kitagawa et al discloses provision of a coating positioned on either or both sides of the filter wall.

It would have been obvious to one having ordinary skill in the art to exclude the coating at the inlet side of the filter wall in the apparatus of Kondo et al if one forgo the benefit of its presence therein, as coating only at the outlet side of the filter wall is known in the art, on the basis of its suitability for the intended use as a matter of obvious design choice, as evidenced by Kitagawa et al, and no cause for patentability here.

Selecting an appropriate pore size for the filter and the membrane is within the purview of one having ordinary skill in the art during routine experimentation and optimization of the filter system.

With respect to claims 3-5, Kondo et al discloses that the filter walls are coated with a coating, such as alumina, to increase the active contact surface area of the filter walls and act as an anchor for the catalytically active coating (col. 5, lines 57-58).

With respect to claims 11-12, Kondo et al discloses that the pores of the filter walls are about 40 μm, and the porosity of the filter walls is within the range of 30-80% (col. 3, line 13 to col. 4, line 58; col. 10, lines 49-50; col. 8, lines 20-21).

With respect to claims 14-15, Kondo et al discloses that the porous membrane comprises alumina powders having size of 5-10 μm (col. 5, lines 6-10, 55-58; col. 11, lines 14-17) while the pore size of the material of the filter wall is within 30-40 μm (col. 10, lines 45-50).

With respect to claim 16, Kondo et al discloses that the means pore size of the porous membrane is in the range of 10-60 μm (col. 3, lines 37-39).

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Kondo et al (EP 736,503) in view of Kitagawa et al (4,857,089) as applied to claims 1-5, 7, 11-12, 14-16 above and further in view of Williamson et al (5,041,407).

Williamson et al discloses provision of coating the substrate with catalyst material and a washcoat including alumina, barium, etc.

It would have been obvious to one having ordinary skill in the art to provide other material, such as barium in the modified filter of Kondo et al for enhancing the catalyst performance as taught by Williamson et al.

5. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Kondo et al (EP 736,503) in view of Kitagawa et al (4,857,089) as applied to claims 1-5, 7, 11-12, 14-16 above and further in view of WO 89/09648.

WO 89/09648 discloses the conventionality of providing a filter made of SiC particles having size within the range of 75-170 μm and the porosity of 50-90%.

It would have been obvious to one having ordinary skill in the art to select an appropriate size for the material of the filter wall and the porosity for the filter walls, such as within the range taught by WO 89/09648 in the apparatus of Kondo et al on the basis of its suitability for the intended use as a matter of obvious design choice to obtain the desired benefits attendant thereof, absence showing any unexpected results, and since it has held that when the only difference between the prior art device and the claim was a recitation of relative size, and the device with the relative size would not perform differently than the prior art device, the claimed device was not patentable distinct.

Response to Arguments

6. Applicant's arguments filed 12/27/05 have been fully considered but they are not persuasive.

Applicants argue that Kondo et al does not teach membrane placement on the outlet side only. Such contention is not persuasive since the instant claim is treated as open language, it does not exclude the additional membrane at the inlet side, and therefore meet the instant claims.

In any event, the secondary reference, Kitagawa et al, discloses the conventionality of providing a coating positioned on either or both sides of the filter wall.

It would have been obvious to one having ordinary skill in the art to exclude the coating at the inlet side of the filter wall in the apparatus of Kondo et al if one forgo the benefit of its presence therein, as coating only at the outlet side of the filter wall is known in the art, on the basis of its suitability for the intended use as a matter of obvious design choice, as evidenced by Kitagawa et al, and no cause for patentability here.

Applicants argue that Kondo et al does not teach the specific pore size of the filter in combination with the pore size of the outlet side membrane as claimed. Such contention is not persuasive as Kondo et al does disclose that the pores of the filter walls are about 20-40 μm, and the porosity of the filter walls is within the range of 30-80% (col. 3, line 13 to col. 4, line 58; col. 10, lines 49-50; col. 8, lines 20-21) and the porous membrane has a means pore size in the range of 10-60 μm (col. 3, lines 37-39) and a thickness of 0.05 mm (col. 10, lines 42-43). Selecting an appropriate pore size for the filter and the membrane is within the purview of one having ordinary skill in the art during routine experimentation and optimization of the filter system.

Applicants argue that in Kitagawa et al, wherever the coating is provided, it is provided only a portion of the filter wall, therefore coverage in full lengths of the filter in Kitigawa et al is avoided. Such contention is not persuasive as the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined

teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, the primary reference, Kondo et al, is relied upon for teaching the coverage at full length. Kitigawa et al is only relied upon for teaching the use of the coating at the outlet side.

Applicants argue that Williamson and WO '648 do not teach the filter incorporating the outlet side membrane. Such contention is not persuasive as the primary and secondary references, Kondo et al and Kitagawa et al, are relied upon for such teachings.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is (571) 272-1454. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1454. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hien Tran

Hien Tran
Primary Examiner
Art Unit 1764

HT